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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,052	04/08/2004	Dustin Kirkland	AUS920031009US1	9656

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EXAMINER	
FIGUEROA, MARISOL	

ART UNIT	PAPER NUMBER
2681	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/821,052	KIRKLAND ET AL.	
	Examiner	Art Unit	
	Marisol Figueroa	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statement (IDS) filed on April 8, 2004 has been considered by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1 and 11** are rejected under 35 U.S.C. 102(b) as being anticipated by **Sawyer US 5,794,140.**

Regarding claim 1, Sawyer discloses a method for accurately conveying wireless connection availability through a tower in a defined area comprising the steps of:

determining the maximum capacity of the tower; establishing a threshold capacity of the tower (col.4, lines 56-60; the cellular telephone system has an predetermined, i.e. established, threshold load that establishes the maximum load, i.e. capacity, that the system supports);

monitoring the calling activity through the tower (col.1, lines 65-67; col.3, lines 24-48; col.4, lines 41-55; the communication load, i.e. calling activity, of the cellular telephone system is monitored); and

broadcasting a connection availability message to wireless devices in the area of the tower (abstract, lines 1-6; col.1, lines 65 - col.2, lines 1-6; col.4, lines 56-67; col.5, lines 1-8; the cellular telephone system generates and broadcasts a message to all proximately located mobile stations

offering the use of the cellular system at a particular time when the system has unused resource capacity, e.g. connection is available).

Regarding claim 11, Sawyer discloses a computer program product in a computer readable medium (col.12, lines 22-41) for accurately conveying wireless connection availability through a tower in a defined area comprising: instructions for determining the maximum capacity of the tower; instructions for establishing a threshold capacity of the tower (col.4, lines 56-60; the cellular telephone system has an predetermined, i.e. established, threshold load that establishes the maximum load, i.e. capacity, that the system supports); instructions for monitoring the calling activity through the tower (col.1, lines 65-67; col.3, lines 24-48; col.4, lines 41-55; the communication load, i.e. calling activity, of the cellular telephone system is monitored); and instructions for broadcasting a connection availability message to wireless devices in the area of the tower (abstract, lines 1-6; col.1, lines 65 - col.2, lines 1-6; col.4, lines 56-67; col.5, lines 1-8; the cellular telephone system generates and broadcasts a message to all proximately located mobile stations offering the use of the cellular system at a particular time when the system has unused resource capacity, e.g. connection is available).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 3-6, and 13-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sawyer** in view of **Padovani et al. US 6,442,398 B1**.

Regarding claim 3, Sawyer discloses the method as described in claim 1, Sawyer further disclose wherein said monitoring step further comprises maintaining a constant and accurate measure of the communication load (Fig.3, step 100; col.1, lines 65-67; col.2, lines 50-57; col.4, lines 5-21; the communication load in the cellular telephone system is monitored constantly during the day as shown in figures 2A and 2B). Sawyer fails to disclose the load is measured as a count of the number of wireless devices that are connected through the tower. Padovani teaches a method and apparatus for determining loading in a communication system and teaches that a simple means of determining communication loading in a base station is by simply count the number of active users, i.e. wireless devices, in the base station (abstract, lines 1-2; col.4, lines 32-34). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to count the number of wireless devices that are connected through the tower as suggested by Padovani, because is a simple method for determining communication loading and also a measure of the calling activity of a system.

Regarding claim 4, the combination of Sawyer and Padovani disclose the method as described in claim 3, Sawyer further disclose the method comprising after said broadcasting step, the steps of receiving and displaying the broadcasted message at a wireless device in the area of the tower (col.1, line 65 – col.2, lines 1-11; the mobile stations proximate to the cellular system receive the offering message and the mobile stations provides a visual indication, e.g. message display, to the subscriber of the arrival of the message).

Regarding claim 5, the combination of Sawyer and Padovani disclose the method as described in claim 4, Sawyer further discloses wherein the display of the broadcasted message is a period event on the wireless device that corresponds to content of the calling availability through that tower (abstract, lines 1-6; col.1, lines 65 - col.2, lines 1-6; col.4, lines 56-67; col.5, lines 1-8; the broadcasted message offers the use of the cellular system at a particular time when the system has unused resource capacity, therefore at the receipt of the message subscribers may initiate cellular calls since there is availability of resources).

Regarding claim 6, the combination of Sawyer and Padovani disclose the method as described in claim 3, Sawyer further discloses wherein said threshold establishing step further comprises establishing multiple threshold levels (col.6, lines 43 – col.7, lines 1-22; the cellular telephone system establishes a load threshold for the uplink air interface and one load threshold for the downlink air interface, for indicating the subscribers when available resources on these air interfaces are available for use).

Regarding claim 13, Sawyer discloses the computer program product as described in claim 11, Sawyer further disclose wherein said monitoring instructions further comprise instructions for maintaining a constant and accurate measure of the communication load (Fig.3, step 100; col.1, lines 65-67; col.2, lines 50-57; col.4, lines 5-21; the communication load in the cellular telephone system is monitored constantly during the day as shown in figures 2A and 2B). Sawyer fails to disclose the load is measured as a count of the number of wireless devices that are connected through the tower. Padovani teaches a method and apparatus for determining loading in a communication system and teaches that a simple means of determining communication loading in a base station is by simply count the number of active users, i.e. wireless devices, in the base station (abstract, lines 1-2; col.4, lines 32-34). Therefore, it would have been obvious to one having ordinary skill in the art at the time

of the invention to count the number of wireless devices that are connected through the tower as suggested by Padovani, because is a simple method for determining communication loading and also a measure of the calling activity of a system.

Regarding claim 14, the combination of Sawyer and Padovani disclose the computer program product as described in claim 13, Sawyer further discloses the method comprising after said broadcasting instructions, instructions for receiving and displaying the broadcasted message at a wireless device in the area of the tower (col.1, line 65 – col.2, lines 1-11; the mobile stations proximate to the cellular system receive the offering message and the mobile stations provides a visual indication, e.g. message display, to the subscriber of the arrival of the message).

Regarding claim 15, the combination of Sawyer and Padovani disclose the computer program product as described in claim 13, Sawyer further discloses wherein said threshold establishing instructions further comprise instructions for establishing multiple threshold levels (col.6, lines 43 – col.7, lines 1-22; the cellular telephone system establishes a load threshold for the uplink air interface and one load threshold for the downlink air interface, for indicating the subscribers when available resources on these air interfaces are available for use).

6. **Claims** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sawyer** in view of **Sauter et al. US 2004/0209623 A1.**

Regarding claim 2, Sawyer discloses the method as described in claim 1, but fails to teach to further comprising the step of detecting when the calling activity has exceeded the established threshold capacity for that tower further before said broadcasting step. Sauter discloses a method of controlling the access to a public land mobile network, comprising a base station, and a plurality of mobile subscribers with an assigned access class, in which the base station broadcast signalization to all subscribers comprising the selected classes which are barred from access according to the load

condition, i.e. calling activity, of the base station (abstract, lines 1-10). Further teaches that it is known in the art to check the load of a network, i.e. calling activity, in some intervals and compare it with predetermined threshold values, and broadcast messages on a cell per cell basis indicating the classes of subscribers to be barred from network access, if the network load exceeds said predetermined threshold value (p.0003-0004). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to detect when the calling activity has exceeded a threshold capacity before the broadcasting step as suggested by Sauter, in order to control the access of users to the network to prevent overload of the network under critical conditions.

Regarding claim 12, Sawyer discloses the computer program product as described in claim 11, but fails to teach to further comprising the instructions for detecting when the calling activity has exceeded the established threshold capacity for that tower before said broadcasting instructions. Sauter discloses a method of controlling the access to a public land mobile network, comprising a base station, and a plurality of mobile subscribers with an assigned access class, in which the base station broadcast signalization to all subscribers comprising the selected classes which are barred from access according to the load condition, i.e. calling activity, of the base station (abstract, lines 1-10). Further teaches that it is known in the art to check the load of a network, i.e. calling activity, in some intervals and compare it with predetermined threshold values, and broadcast messages on a cell per cell basis indicating the classes of subscribers to be barred from network access, if the network load exceeds said predetermined threshold value (p.0003-0004). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to detect when the calling activity has exceeded a threshold capacity before the broadcasting step as suggested by Sauter, in order to control the access of users to the network to prevent overload of the network under critical conditions.

7. **Claims 7-9, and 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sawyer** in view of **Padovani,** and further in view of **Sauter et al.**

Regarding claim 7, the combination of Sawyer and Padovani disclose the method as described in claim 6, but fails to teach to further comprising the step of detecting when the calling activity has exceeded the established threshold capacity for that tower further before said broadcasting step. Sauter discloses a method of controlling the access to a public land mobile network, comprising a base station, and a plurality of mobile subscribers with an assigned access class, in which the base station broadcast signalization to all subscribers comprising the selected classes which are barred from access according to the load condition, i.e. calling activity, of the base station (abstract, lines 1-10). Further teaches that it is known in the art to check the load of a network, i.e. calling activity, in some intervals and compare it with predetermined threshold values, and broadcast messages on a cell per cell basis indicating the classes of subscribers to be barred from network access, if the network load exceeds said predetermined threshold value (p.0003-0004). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to detect when the calling activity has exceeded a threshold capacity before the broadcasting step as suggested by Sauter, in order to control the access of users to the network to prevent overload of the network under critical conditions.

Regarding claim 8, the combination of Sawyer and Sauter discloses the method as described in claim 7, Sauter further disclose comprising the step of determining the closest threshold level that has been exceeded by the calling activity (p.0025; the network establishes a lower and a higher load threshold, the system continuously monitors the traffic in the network and compared to the thresholds). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include the step of determining the closest threshold level, i.e. lower

threshold, has been exceeded by the calling activity as suggested by Sauter, in order to detect when the traffic, i.e. calling activity, in the cell starts increasing.

Regarding claim 9, the combination of Sawyer and Sauter discloses the method as described in claim 8, Sauter further disclose wherein said broadcasting step further comprises broadcasting a calling activity message to wireless device in the area of the tower, the message corresponding to the exceeded threshold level (p.0025; after the thresholds values are exceeded the base station controller broadcast signalization, i.e. message, to all subscribers indicating an access class which indicates the beginning of congestion of the system). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to broadcast a calling activity message to the wireless device in the area of the tower as suggested by Sauter, in order to notify the wireless devices in the area if they are capable of accessing the network.

Regarding claim 16, the combination of Sawyer and Padovani discloses the computer program product as described in claim 15, but fails to teach to further comprising the instructions for detecting when the calling activity has exceeded the established threshold capacity for that tower before said broadcasting instructions. Sauter discloses a method of controlling the access to a public land mobile network, comprising a base station, and a plurality of mobile subscribers with an assigned access class, in which the base station broadcast signalization to all subscribers comprising the selected classes which are barred from access according to the load condition, i.e. calling activity, of the base station (abstract, lines 1-10). Further teaches that it is known in the art to check the load of a network, i.e. calling activity, in some intervals and compare it with predetermined threshold values, and broadcast messages on a cell per cell basis indicating the classes of subscribers to be barred from network access, if the network load exceeds said predetermined threshold value (p.0003-0004). Therefore, it would have been obvious to one having ordinary skill in the art at the

time of the invention to detect when the calling activity has exceeded a threshold capacity before the broadcasting step as suggested by Sauter, in order to control the access of users to the network to prevent overload of the network under critical conditions.

Regarding claim 17, the combination of Sawyer and Sauter discloses the computer program product as described in claim 16, Sauter further disclose comprising the instructions for determining the closest threshold level that has been exceeded by the calling activity (p.0025; the network establishes a lower and a higher load threshold, the system continuously monitors the traffic in the network and compared to the thresholds). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include the step of determining the closest threshold level, i.e. lower threshold, has been exceeded by the calling activity as suggested by Sauter, in order to detect when the traffic, i.e. calling activity, in the cell starts increasing.

Regarding claim 18, the combination of Sawyer and Sauter discloses the computer program product as described in claim 17, Sauter further disclose wherein said broadcasting instructions further comprise instructions for broadcasting a calling activity message to wireless device in the area of the tower, the message corresponding to the exceeded threshold level (p.0025; after the thresholds values are exceeded the base station controller broadcast signalization, i.e. message, to all subscribers indicating an access class which indicates the beginning of congestion of the system). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to broadcast a calling activity message to the wireless device in the area of the tower as suggested by Sauter, in order to notify the wireless devices in the area if they are capable of accessing the network.

8. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sawyer** in views of **Padovani et al.**, and **Sauter et al.**, and **Chen et al. US 2005/0059401 A1.**

Regarding claim 10, Sawyer discloses a system and system for accurately conveying wireless connection availability comprising:

a telephone tower for use in connecting wireless devices (col.3, lines 24-34; Base Station);

a software routine capable of monitoring the load in the system and comparing against a predetermined threshold level and broadcasting a message to wireless devices in the area related to the connection capability through that tower (col.4, lines 41-67; col.12, lines 22-41; the mobile switching center connected which is connected to the base station have instruction for measuring the load in the system and compare it against a threshold for determining when to broadcast a message to mobile stations to invite users to make use of the cellular system because there is unused capacity);

a wireless device for use in communicating via the telephone control tower; and software within the wireless device for receiving and displaying connection availability via the tower (col.1, line 65 – col.2, lines 11; note that inherently the mobile device contains software stored in the memory to function).

However Sawyer fails to disclose that the software routine is stored within the mobile switching center rather than within the telephone tower, i.e. BS; the load is measured as a count of the number of wireless devices, and the broadcasted message is transmitted to the wireless devices when the load, i.e. count of the wireless devices connected, exceeds a predetermined threshold.

Chen teaches a wireless telecommunications systems and teaches that mobile switching centers may be integrated into the base stations themselves (p.0023). It would have been obvious to one having ordinary skill in the art at the time of the invention to integrate the MSC with the communication tower, i.e. BS, and therefore software routine would be within the communication

tower, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin vs. Erlichman*, 168 USPQ 177, 179.

The combination of Sawyer and Chen fails to disclose that the load is measured as a count of the number of wireless devices that are connected through the tower. Padovani teaches a method and apparatus for determining loading in a communication system and teaches that a simple means of determining communication loading in a base station is by simply count the number of active users, i.e. wireless devices, in the base station (abstract, lines 1-2; col.4, lines 32-34). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to count the number of wireless devices that are connected through the tower as suggested by Padovani, because is a simple method for determining communication loading and also a measure of the calling activity of a system.

The combination of Sawyer, Chen, and Padovani fails to disclose that the broadcasted message in transmitted to the wireless devices when the load, i.e. count of wireless devices connected, exceed a predetermined threshold. Sauter discloses a method of controlling the access to a public land mobile network, comprising a base station, and a plurality of mobile subscribers with an assigned access class, in which the base station broadcast signalization to all subscribers comprising the selected classes which are barred from access according to the load condition, i.e. calling activity, of the base station (abstract, lines 1-10). Further teaches that it is known in the art to check the load of a network, i.e. calling activity, in some intervals and compare it with predetermined threshold values, and broadcast messages on a cell per cell basis indicating the classes of subscribers to be barred from network access, if the network load exceeds said predetermined threshold value (p.0003-0004). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to detect when the calling activity has exceeded a threshold before the

broadcasting step as suggested by Sauter, in order to control the access of users to the network to prevent overload of the network under critical conditions

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER

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